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Difficulties of healthcare workers encountered under cohort isolation in a psychiatric hospital during the COVID-19 pandemic: A qualitative study

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ABSTRACT

This study examined the experiences of healthcare workers who were quarantined within the psychiatric wards due to COVID-19 and analyzed those experiences with a consensual qualitative research method. Participants experienced (a) difficulties due to the specificity of a mental hospital, including a lack of protocols, noncompliance with quarantine guidelines among patients with severe mental illness, and a shortage of institutions capable of containing confirmed COVID-19 patients with severe mental illness. Furthermore, (b) difficulties related to isolation of the cohort itself included a workforce shortage, physical problems, fear of infection, limited facilities, guilt toward newly confirmed cases, exhaustion, and distress caused by separation from family. The participants also described (c) difficulties related to external factors, including administrative orders and the perceived stigma, and (d) positive experiences. Appropriate support is needed during the COVID-19 pandemic to reduce the difficulties among healthcare workers in psychiatric hospitals. This includes preparation for future scenarios, facilities, and workers in response to outbreaks of infection in psychiatric hospitals that cause unique risks and challenges among those workers.

1. Introduction

Since the onset of the highly infectious coronavirus disease 2019 (COVID-19) pandemic, overwork among healthcare workers (HCWs) has been a critical problem. The exhaustion and mental health problems of HCWs since the pandemic began are major concerns in the infection control system (Rodríguez and Sánchez, 2020; Santarone et al., 2020).

Cross-sectional online surveys were conducted during pandemic outbreaks in New York, Singapore and Japan etc. These surveys have commonly reported HCWs' psychological distress and poor mental health. (Shechter et al., 2020; Tahara et al., 2020; Teo et al., 2021) Not only these cross-sectional studies, but also 37 studies reported by Shreffler et al. have consistently described stress, anxiety and depressive

symptoms in healthcare workers as a result of COVID-19 in their scoping review. (Shreffler et al., 2020) d'Ettoire et al. reported even post-traumatic stress symptoms in HCWs dealing with the COVID-19 pandemic in their systematic review. (d'Ettoire et al., 2021) And there is a study reporting thirty-day suicidal thoughts and behaviors among hospital workers during the first wave of the COVID-19 outbreak were higher than those of the general population. (Mortier et al., 2021)

Isolation or quarantine could cause the negative psychological impacts on the isolated people. (Abad et al., 2010; Brooks et al., 2020; Jeong et al., 2016) HCWs were not exceptions. Nguyen et al., reported HCWs who were quarantined within the health facilities in Vietnam experienced increased stress. (Nguyen et al., 2021) And Lee et al. also reported HCWs isolated as a cohort in the locked down hospital in

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South Korea experienced higher depression and anxiety. (H.A. Lee et al., 2021) A large cross-sectional survey which investigated mental health impact of the first wave of COVID-19 pandemic on Spanish HCWs reported that having quarantined or isolated are risk factors for mental disorders. (Alonso et al., 2021) Also, Muller et al. systematically reviewed studies of the mental health impacts of the COVID-19 pandemic on healthcare workers and they stated that quarantine would be one of the risk factors. (Muller et al., 2020)

The various nature of psychiatric wards or hospital makes infectious disease management more difficult. Crowdedness, the environment promoting interpersonal relationship like group therapy, uncooperative patients and unfamiliarity with infection control measures of medical staffs are all contributed to weakness to infection within the psychiatric department. (Rovers et al., 2020) Psychiatric patients are high risk group and majority of them show low adherence with infection control measures, (Williams et al., 2021) and some of the large-scale infections occurred at the psychiatric wards. (Ji et al., 2020) Many attempts trying to improve the environment of the psychiatric department including telemedicine are emerging nowadays. (Moreno et al., 2020; Roncero et al., 2020; Vieta et al., 2020) However in the current situation of pandemic continuation, HCWs burden has not been alleviated yet and the HCW's psychological burden continues. Only few studies about the mental health of the HCWs in psychiatric hospitals were conducted.

South Korea was one of the countries with the strict infection control policies. If a COVID-19 outbreak occurs as a group, exposed people (including staff and patients in the same ward) are isolated as a cohort to control the spread of infection. Many hospitals and even whole apartments may become isolated as a cohort. During active surveillance, if a new case is recognized among isolated members, the termination is delayed for an additional 2-week incubation period. Thus, exposed HCWs and psychiatric patients are quarantined in closed wards with a limited workforce, without knowing when the outbreak will end. This policy had been conducted for two years until February 2022 when isolation period have been newly shortened to seven days.

As mentioned above, many studies have been conducted on the mental health of the HCWs during the COVID-19 Pandemic, but there are few studies about HCWs working in the psychiatric wards or hospitals. As far as we acknowledge, there has not been a study conducted about HCWs isolated with patients in the psychiatric hospital. In this study, we aimed to understand the difficulties of HCWs who were isolated with their patients in a psychiatric hospital and explored their experiences by qualitative method. In-depth interviews were carried out in a cohort-isolated psychiatric hospital during the COVID-19 pandemic. We expect that understanding their experiences will be helpful for improving the mental healthcare system and responses to future infectious disasters.

2. Methods

2.1. Study design and participants

This study included HCWs who worked for a psychiatric hospital and had experienced cohort isolation. On December 17th, 2020, six psychiatric patients were confirmed to be COVID-19-positive and the exposed wards were quarantined as a cohort to prevent possible future transmissions. The usual protocol of the active monitoring period was 2 weeks, but the isolation lasted to 51 days. Because new covid-19 positive cases were continuously outbreaking until January 23, 2021, and the discontinuation of the quarantine was delayed. As a result, 232 patients out of 613 and 50 HCWs out of 173 were isolated within the hospital. The cumulative incidence of positive cases in the institution turned out to be 170 cases (150 patients, 20 HCWs). Among the confirmed case, 8 mentally ill COVID-19 patients have passed away due to medical complication during intensive care after they were transferred to COVID-19 hospitals.

Consistent with Hill's (2012) recommendation of sample size for

consensual qualitative research (CQR) ($n = 8-15$), 11 participants were recruited using purposive sampling. The majority of quarantined HCWs in the admission wards were nurses; therefore, the interview included majority of nurses and other hospital personnels in order to reflect wide aspects of experiences.

The interviews focused mainly on the views and experiences of the HCWs who provided medical care and assistance to mentally disordered patients during cohort isolation. We created the interview outline by seeking opinions and selecting four psychiatrists for pre-interview. The final semi-structured interview included the following main questions: "What difficulties did you experience providing psychiatric care and infection control in a cohort of an isolated ward?", "How did you feel when working during cohort isolation?", "What has changed in your life during the COVID-19 pandemic?", "and what are the main psychological and physical problems that you have encountered?"

2.2. Data collection

Demographic and work-related information was obtained from the study participants before their interviews (Table 1). Researchers conducted semi-structured interviews with each participant by online video in early 2021. The interviewers listened in an empathetic and non-judgmental manner when collecting the data. The interviews were recorded, or recorded verbatim, with the permission of the participants.

2.3. Analysis

A Consensual Qualitative Research was used for data analysis in this study. In accordance with Hill's (2012) guidelines conducting CQR, all analytical decisions were made by consensus.

2.3.1. Research team

Following the CQR guidelines, a research team was formed for this study. The research team included four counseling psychology graduate students, and all research team members received intensive training in conducting CQR. The counseling psychology faculty member served as the auditor.

2.3.2. Procedure

After all interviews had been transcribed, four researchers in the research team independently reviewed the transcripts and analyzed them by creating domains based on consensus. The team reviewed the list of potential domains for each transcribed interviews, noting differences among members. Then, each member coded the same transcript, and the team reviewed each member's coded transcript to verify consistency in the coding process. The domain list was continuously revised upon consensus. Then, the auditor reviewed the data with the generated domains and provided feedback to the team.

After integration of the auditor's feedback, the team developed a "category" for each domain to describe the full contents of each domain with cross analysis. The same process was repeated to reach a consensus when developing the categories. The data with the list of domains and categories were sent to the auditor again, and the auditor's feedback was integrated in the final set of domains and categories.

The final step in the analysis process represents the domains and categories. Consistent with CQR methodology (Hill, 2012), a category mentioned in nine or more cases was given a frequency description of "general", a category mentioned in 5-8 cases were considered "typical," and a frequency of 2-4 was considered "variable."

2.4. Ethical statement

This study was approved by the Institutional Review Board (IRB) of the National Medical Center (IRB No. NMC-2010-081). All participants provided informed consent at the time of study enrollment.

3. Results

This study explored the in-depth experiences of the medical staff working in an isolated cohort of a psychiatric hospital. The qualitative data analysis yielded four domains: (1) HCWs' perception of difficulties due to the specificity of a mental hospital, (2) HCWs' perception of difficulties due to cohort isolation, (3) HCWs' perception of difficulties related to external factors, and (4) positive experiences. The main domains and categories in this study with the frequency labels are presented in Table 2.

3.1. Domain 1: HCWs' perception of difficulties due to the specificity of a mental hospital

Difficulties related to the uniqueness of a psychiatric hospital refers to the challenges that HCWs experience when providing COVID-19-related medical care because of the specific characteristics of a psychiatric hospital. Three categories that are central to this domain emerged: lack of protocols in the response to confirmed COVID-19 cases in psychiatric hospitals ($n = 8$), noncompliance with quarantine guidelines among patients with severe mental illness ($n = 7$), and a shortage of institutions capable of containing confirmed COVID-19 patients with severe mental disorders ($n = 6$).

3.1.1. Lack of protocols in the response to confirmed COVID-19 cases in psychiatric hospitals

A difficulty reported by the medical staff was the absence of quarantine protocols that reflect the uniqueness of a psychiatric ward. The medical staff reported confusion because of conflicting guidelines related to the Mental Health Act and the quarantine guidelines. They also indicated inconsistent government guidelines and difficulties communicating with governmental officials when they needed guidance, which led to more confusion.

"We cannot violate the Mental Health Act and there are no exceptions, but the patient cannot be discharged immediately, no answers can be provided, and it is not possible to contact the government. It would be good if the application of the Mental Health Act was postponed or guidelines were prepared for the psychiatric ward that had a confirmed case."

3.1.2. Noncompliance with quarantine guidelines among patients with mental illness

The medical staff reported difficulties in explaining the risk of COVID-19 infection to mentally ill patients and compelling them to follow the quarantine guidelines. They also stated that persuading patients to wear masks was difficult. Some patients refused to wear protective clothing, even among confirmed COVID-19 patients. Hence, transporting the patients became an arduous task. The staff also stated that they had difficulty making the patients understand why they should be tested for COVID-19. Thus, additional manpower was required each time the patients were tested. Some HCWs commented that the provision of a video education program suitable for the level of chronically mentally ill patients would be welcome.

"Because they are people with intellectual disabilities, they cannot understand even if they are told something, and they often resist or behave violently. When we put a protective suit on them for inspection, they take it off...."

3.1.3. Shortage of institutions capable of containing quarantined or confirmed COVID-19 patients with severe mental disorders

Few hospitals can accommodate quarantined and confirmed COVID-19 patients with a mental illness. Thus, the medical staff in an isolated cohort of a psychiatric hospital reported difficulty in transporting patients to other hospitals. They added that considerable administrative effort was expended to find places to send patients, and they had to accept additional quarantined or confirmed COVID-19 patients with

mental illness from other institutions.

"The psychiatric hospital is not ready to handle infected patients, and the infection ward is afraid to manage mental patients. When a mental patient becomes an active monitoring target due to a confirmed patient in a psychiatric hospital, there is no transferring hospital, so the cohort is isolated with the staff."

3.2. Domain 2: HCWs' perception of difficulties due to cohort isolation

The medical staff discussed the inherent difficulties related to cohort isolation. This domain was composed of seven categories: (1) struggles related to perceived workforce shortage ($n = 11$), (2) physical problems ($n = 11$), struggles related to the workforce shortage (3) fear of infection ($n = 8$), (4) difficulties related to limited staff facilities ($n = 7$), (5) feelings of guilt toward newly confirmed cases ($n = 7$), (6) exhaustion related to prolonged lockdown ($n = 5$), and (7) psychological distress related to separation from family ($n = 4$).

3.2.1. Struggles related to perceived workforce shortage

Because they worked in a quarantined cohort ward with a limited workforce, the medical staff did not work in shifts and sometimes were required to work for 24 h. The staff in the nursing ward reported that they were usually assisted by unlicensed personnel when changing diapers, feeding the patients, and administering medicines. However, when then unlicensed assistant personels were confirmed to be COVID-19 patients and became unavailable, the nurses were also required to perform their roles as well. Additionally, the nurses cleaned the ward and assisted patients in going to the toilet. They were also required to manage numerous phone calls from the guardians and family members.

"The cohort ward lacked manpower because only the limited staff members were quarantined together. However, other medical staff did not wish to enter here, and if quarantined workers were infected, they had to be replenished, but that was not easy."

3.2.2. Physical problems

Because the medical staff worked long shifts and manpower was lacking, the staff experienced extreme fatigue and a lack of sleep. They also reported experiencing constipation because of the lack of available restrooms.

"Lack of sleep was the most difficult part. While living in the ward for a few days, I was unable to sleep deeply and was always on standby."

The medical staff complained of various physical hardships resulting from wearing protective garments for prolonged periods. Because the patients had to be frequently ventilated during quarantine, the heating system was set to the maximum, particularly during winter. The staff were required to endure hot and stuffy air conditions related to the use of protective clothing. However, they could not easily shower because of the lack of shower facilities. They had difficulty holding their urine because the protective clothing could not be easily removed. They also reported skin rashes caused by wearing gloves for extended period of time.

"I have developed eczema while working in latex gloves, causing my hands to crack and leading to pain while disinfecting my hands."

3.2.3. Fear of infection

Regardless of how thoroughly the ward had been disinfected, the staff experienced psychological stress and developed compulsive behaviors, such as obsessive cleaning, because of the fear of contracting COVID-19.

"We obsessively disinfected the ward where a confirmed case occurred. I did not initially have obsessive-compulsive disorder, but I just kept cleaning every moment after COVID-19, and the condition regarding my obsessive-compulsive disorder became severe."

The medical staff members expressed concern that their families were worried about them because of the possibility of getting infected with COVID-19. Moreover, the medical staff worried that their children

would be bullied at school because of the stigma and discrimination toward medical staff working with confirmed patients.

“My family worries. They even told me to quit working at the hospital. I also use a separate room at home to prevent harming my wife and children. It is a kind of self-quarantine. I cannot tell my family that I take care of confirmed cases.”

3.2.4. Difficulties related to limited staff facilities

The ward did not have accommodation or living facilities for medical staff before the pandemic because they originally commuted to work. Considering that the cohort was required to be quarantined, the staff experienced difficulties sleeping, eating, using the toilet, and showering due to the lack of facilities.

“The staff restroom is outside, but because this was a cohort quarantine ward, I could not go out, so I had extreme difficulty in using restroom and taking a shower.”

3.2.5. Feelings of guilt toward newly confirmed cases in the isolated wards

The medical staff expressed feelings of guilt over the increasing number of confirmed COVID-19 patients despite their best efforts to disinfect the ward. They also expressed frustration about the increasing number of confirmed cases among their fellow medical staff members.

“I was negative, but I was frustrated when the medical staff and the caregiver I worked with were positive. We all struggled together, and I was so sorry for them...”

3.2.6. Exhaustion related to prolonged lockdown

The medical staff experienced physical and mental exhaustion because they could not predict when the pandemic would end.

“I could not stand the sudden surge of anger and a bit of depression.”

3.2.7. Psychological distress related to separation from family

The medical staff experienced psychological distress because of isolation and prolonged separation from their families. In one instance, the family members of staff stared wistfully at the hospital from a distance.

“Parents cannot enter the hospital, so they came to the back of the hospital once or twice and watched me from a distance.”

3.3. Domain 3: HCWs' perception of difficulties related to external factors

This domain refers to the difficulties that HCWs experienced originating from the outside, such as administrative instructions that ignored actual conditions in the psychiatric hospital and the negative attitudes of the community toward medical staff because of a fear of infection. This domain included categories of administrative problems ($n = 7$) and stigma against medical staff related to the fear of infection ($n = 5$).

3.3.1. Reported administrative problems

The medical staff reported that they were required to manage unrealistic, inefficient, and inconsistent instructions from government agencies that issued quarantine-related orders without a firm grasp of the actual conditions in the psychiatric hospital. For example, considering that a psychiatric hospital is unique from other types of hospitals, a guardian's signature must be obtained periodically when patients are hospitalized involuntarily. However, acquisition of a guardian's signature was difficult when patients were hospitalized during the quarantine period.

“Another problem is that public officials, as non-professionals, only check the manual and give instructions that do not fit reality.”

3.3.2. Perceived stigma against medical staff due to fear of infection

The medical staff reported that they had difficulties securing accommodations and dining in the community because of the stigma against them. They did not readily receive emotional or instrumental

support because other staff members were reluctant to contact the medical staff in the ward with confirmed cases; this reluctance was related to a fear of contracting COVID-19.

“There was also a stigma about medical workers in the community. As the number of confirmed cases increased, it was difficult for the staff to use restaurants or convenience stores.”

3.4. Domain 4: Positive experience

Although the hospital situation was difficult, the medical staff had positive experiences, such as taking pride as HCWs ($n = 8$), feelings of solidarity among the staff in the isolated wards ($n = 5$), and increased professional capability in managing psychiatric patients during a pandemic ($n = 3$).

3.4.1. Taking pride as healthcare workers

Despite this harrowing experience, the medical staff reported that they felt proud of their vocations and responsibilities as HCWs. They also took pride in knowing that they were performing important jobs.

“There was a time when I thought that the job of being a nurse was a good fit for me. Though it is a very difficult situation right now, but...”

3.4.2. Feelings of solidarity among the staff in the isolated wards

The medical staff stated that they developed a strong and mutual trust with colleagues in difficult situations and were able to rely on each other. They also reported that they supported each other by taking the initiative when performing tasks, rather than putting off work under challenging situations.

“However, the colleagues who served as mentors in the hospital helped. I am sorry and grateful to the medical staff working with the isolated cohorts.”

3.4.3. Perceived increased ability in managing psychiatric patients during a pandemic

Because of the unique experience they gained while working with an isolated cohort from a psychiatric hospital, the medical staff reported that they had increased professional ability to cope with crises and respond to patients. The medical staff acquired crucial skills in managing emergent situations in a psychiatric hospital.

“It seems that the ability to cope with the infection situation improved. At first, I was in a hurry when I had a feverish patient. Now, the patient is taken directly to the quarantine room, and I use a quick kit immediately...”

4. Discussion

We conducted in-depth interviews with HCWs in an isolated cohort of a psychiatric hospital and found that they reported four domains of experiences: “HCWs perception of difficulties due to the specificity of a mental hospital,” “HCWs perception of difficulties due to cohort isolation,” “HCWs perception of difficulties related to external factors,” and “positive experiences.”

There are numerous qualitative studies about HCWs' psychology under COVID-19 pandemic conditions. (Billings et al., 2021; Koontalay et al., 2021) But as mentioned in introduction, there is no study about cohort isolated HCWs who work in the psychiatric hospital. We found a qualitative study about HCWs' experiences in cohort isolation units because of carbapenemase-producing Enterobacterales infection prevention. (Eli et al., 2020) In the study, the HCWs complaints about stigma, fear of infection and poor infrastructure like lack of basic facilities. These are consistent with our study, but their study concluded not only HCWs but also isolated patients without mental disorders as well as their family members.

The first domain in this study is HCWs' perception of difficulties due to the specificity of a mental hospital. There were many difficulties and confusion at the early stages of the pandemic because of insufficient

protocols and guidelines. The absence of organizational level support was a risk factor among Italian healthcare professionals during the COVID-19 pandemic. (De Leo et al., 2021). Inconsistent guidelines generate confusion and distrust of frontline HCWs during the COVID-19 pandemic. (Hoernke et al., 2021) Many guidelines and protocols have been developed and applied as the pandemic has progressed. The specific guidelines for psychiatric patients and protocols or scenarios for psychiatric hospitals should be also available in the event of a disease outbreak.

Second category of first domain is noncompliance to the quarantine guidelines among patients with severe mental illness. This is consistent with previous research indicating that most psychiatric in-patients defy the guidelines and instructions from staff. (Williams et al., 2021) Furthermore, a cohort study reported that patients with mental illness are at high risk for COVID-19 related death and there is a report about severe mental illness is associated with increased mortality and severe course of COVID-19. (Barcella et al., 2021; Seon et al., 2021) In spite of this, there are yet few institutions that are capable of containing confirmed COVID-19 patients with severe mental illness like third category in this report. Therefore, sufficient institutions capable of containing confirmed or quarantined COVID-19 patients with severe mental illness must be provided in order to meet the medical needs in the future.

As in the second domain, the participants reported difficulties due to cohort isolation and third domain is HCWs perception of difficulties related to external factors. These difficulties are struggles related to perceived workforce shortage, physical problems, fear of infection, struggles related to limited staff facilities, feeling of guilt, exhaustion, psychological distress due to separation from family, administrative problems and stigma. These are not far from previous qualitative studies about HCWs under other COVID-19 pandemic situations. (Aughterson et al., 2021; Banerjee et al., 2021; J.Y. Lee et al., 2021; Rathnayake et al., 2021) However, the HCWs in this study had worked in a critical situation, because they had cared for in-patients with severe mental illnesses without a break. "Difficulties related to the limited staff facilities" were more unique to the psychiatric hospital. Because the facilities were not equipped for staff sleeping or showering in the psychiatric ward, isolation with patients was very stressful to the participants in this study.

The HCWs in this study also described positive experiences, such as pride, solidarity among the staff, and increased professional capability during the isolation period in spite of these problems. Previous studies also reported these positive experiences of HCWs during the COVID-19 pandemic. Billings et al. reported personal and professional growth of frontline HCWs in their systemic review. (Billings et al., 2021) And Aughterson et al. reported personal growth and increased team unity of frontline health and social care professionals in the UK. (Aughterson et al., 2021) Liu et al. also reported increased level of the health care providers' responsibility, support from colleagues and proud of themselves. (Liu et al., 2020) Ektekar Ardebili et al. reported gaining experiences and self-confidence of healthcare providers working during the COVID-19 pandemic. (Eftekhar Ardebili et al., 2021)

Some limitations of this study should be discussed. First, we could only access one hospital. The sample was not a homogeneous group; it was composed of physicians, nurses, nurses' aides, caretakers, and administrative staff. Third, we only used qualitative methods, such as interviews; no quantitative analysis was performed. Multicenter, quantitative studies of homogeneous groups must be conducted to address these limitations.

Despite its limitations, this is the first qualitative study to analyze the experiences of psychiatric hospital workers isolated with psychiatric in-patients as a cohort during the COVID-19 pandemic. Our study revealed that the HCWs experienced distress related to the unique features of severely mentally ill patients and critical situations created by isolation of the cohort. They also experienced many psychological and physical difficulties, as well as some positive experiences. Thus, we have provided an extensive understanding of psychiatric hospital patients and

Table 1
Profile of Interview participants.

No	Gender	Age, year	Job	Career, year
1	Male	48	Psychiatrist	24
2	Female	57	Nurse's aide	30
3	Female	28	Nurse	6
4	Female	42	Nurse	20
5	Male	39	Caretaker	14
6	Female	32	Nurse	7
7	Female	42	Nurse	13
8	Female	32	Nurse's aide	1
9	Male	39	Nurse	8
10	Male	34	Administrative staff	7
11	Male	57	Administrative staff	12

Table 2
The main domains and sub-categories extracted from the data analyses.

Domain	Categories	Frequency
HCWs perception of difficulties due to the specificity of a mental hospital	Lack of protocols in the response to confirmed COVID-19 cases in mental hospitals	Typical (8)
	Noncompliance to the quarantine guidelines among patients with severe mental illness	Typical (7)
	Shortage of institutions capable of containing confirmed COVID-19 patients with severe mental illness	Typical (6)
HCWs perception of difficulties due to cohort isolation	Struggles related to perceived workforce shortage	General (11)
	Physical problems	General (11)
	Fear of infection	Typical (8)
	Struggles related to limited staff facilities	Typical (7)
	Feelings of guilt toward newly confirmed cases	Typical (7)
	Exhaustion due to prolonged lockdown	Typical (5)
	Psychological distress due to separation from family	Variant (4)
HCWs perception of difficulties related to external factors	Reported administrative problems	Typical (7)
	Perceived stigma against medical staff due to fear of infection	Typical (5)
	Pride as healthcare providers	Typical (8)
	Feelings of solidarity among the staffs	Typical (5)
Positive experience	Perceived increased ability in managing psychiatric patients during a pandemic	Variant (3)

workers in a complex situation. It is important to control infections and establish a healthcare system for severely mentally ill patients in response to outbreaks of infection.

In South Korea, the level of SARS-CoV-2 infection has exploded after the appearance of omicron variant. The South Korean government announced new policy that infected in-patients should be treated within the hospital previously hospitalized, without being transferred. And cohort isolation period was decreased down to 7 days. But there are a lot of controversial issues left to be discussed in the future. Many psychiatric hospitals are still not prepared to treat infected patients with severe mental illnesses. In regard to high mortality rate of the psychiatric patients, severe destruction of healthcare system may happen in the future, without the suggested improvement of the issues proposed in this report. Much change should be installed in psychiatry departments in order to prepare for the possible pandemics in the future.

Psychiatric ward should be redesigned to prevent infection from spreading and equipped with trained staffs as well as medical instruments like O2 supplier and personal protective equipment. Close communication with administration, appropriate guideline and protocols must be prepared. And the plenty of methods that solve the

HCWs' difficulties and promote their positive experiences should be considered.

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CRedit authorship contribution statement

Hwallip Bae: Conceptualization, Writing – original draft. **Jangrae Kim:** Investigation, Data curation, Writing – review & editing. **So Hee Lee:** Conceptualization, Investigation, Data curation, Writing – original draft. **Ji-yeon Lee:** Methodology, Formal analysis, Writing – review & editing. **Ju-Yeon Lee:** Investigation, Data curation, Writing – review & editing. **Hye Yoon Park:** Investigation, Data curation, Writing – review & editing. **Yeonjae Kim:** Investigation, Data curation, Writing – review & editing. **Ki Tae Kwon:** Conceptualization, Writing – review & editing.

Declaration of Competing Interest

All other authors declare that they have no conflicts of interest.

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